

LISTING OF THE CLAIMS

The following listing of claims replaces all claim listings and versions in the application:

1. (Currently Amended) A radio network system having a radio base station connected to a communication line and utilizing radio as a data transfer medium and a plurality of radio mobile terminals connected via the radio base station to the communication line, the radio base station comprising:

means for managing a radio mobile terminal of the plurality of radio mobile terminals as to whether the radio mobile terminal is in a power-saving mode for saving power by intermittent power reception or a normal mode with power received at all times on the basis of a predetermined protocol;

means for receiving and discriminating by an apparatus at a first node of the radio network system broadcast packets traveling over the communication line addressed to the radio mobile terminal operating in the power-saving mode and, when a broadcast packet concerning a physical address inquiry is found among the broadcast packets traveling over the communication line addressed to the radio mobile terminal, responding to the broadcast packet by the apparatus as an agent for the radio mobile terminal to solve the physical address inquiry; and

means for reporting the reception of the physical address inquiry to the radio mobile terminal operating in the power-saving mode to urge the radio mobile terminal to switch the ~~operation mode~~ to the normal mode.

2. (Currently Amended) A radio network system having a radio base station connected via an external control unit to a communication line and utilizing radio as a data transfer medium and a plurality of radio mobile terminals connected via the radio base station to the communication line;

the external control unit includes ~~means for~~ a managing apparatus operable to manage a radio mobile terminal of the plurality of radio mobile terminals as to whether the radio mobile terminal is in a power-saving mode for saving power by intermittent power reception or a normal mode with power received at all times on the basis of a predetermined protocol;

~~means~~ a receiving apparatus operable for receiving and discriminating broadcast packets traveling over the communication line addressed to the radio mobile terminal operating in the power-saving mode and, when a broadcast packet concerning a physical address inquiry is found among the broadcast packets traveling over the communication line addressed to the radio mobile terminal, responding to the broadcast packet as an agent for the radio mobile terminal to solve the physical address inquiry; and

~~means~~ a reporting apparatus operable for reporting the reception of the physical address inquiry to the radio mobile terminal operating in the power-saving mode to urge the radio mobile terminal to switch ~~the operation mode~~ to the normal mode.

3. (Currently Amended) The radio network system according to claim 2, wherein the ~~solving means for the physical address inquiry~~ receiving apparatus responds to the broadcast packet as an agent for the ~~pertinent~~ radio mobile terminal without causing the same broadcast packet to be held ~~in the own~~ at the base station.

4. (Currently Amended) The radio network system according to one of claims 1 and 2, wherein the ~~solving means for the physical address inquiry~~ receiving apparatus responds to the broadcast packet as an agent for the ~~pertinent~~ radio mobile terminal without sending out the same broadcast packet ~~[[to]]~~ via the radio transfer ~~line side~~ medium.

5. (Currently Amended) A radio base station connecting a plurality of radio mobile terminals to a communication line by utilizing radio as a data transfer medium, the radio base station comprising:

means for managing a radio mobile terminal of the plurality of radio mobile terminals as to whether the radio mobile terminal is in a power-saving mode for saving power by intermittent power reception or a normal mode with power received at all times on the basis of a predetermined protocol;

means for receiving and discriminating broadcast packets traveling over the communication line addressed to the radio mobile terminal operating in the power-saving mode

and, when a broadcast packet concerning a physical address inquiry is found among the broadcast packets traveling over the communication line addressed to the radio mobile terminal, responding to the broadcast packet as an agent for the radio mobile terminal to solve the physical address inquiry; and

means for reporting the reception of the physical address inquiry to the radio mobile terminal operating in the power-saving mode to urge the radio mobile terminal to switch ~~the operation mode~~ to the normal mode.

6. (Currently Amended) The radio base station according to claim 5, wherein the solving means for the physical address inquiry responds to the broadcast packet as an agent for the pertinent radio mobile terminal without causing the same broadcast packet to be held ~~in the own~~ at the base station.

7. (Currently Amended) The radio base station according to claim 5, wherein the solving means for the physical address inquiry responds to the broadcast packet as an agent for the ~~pertinent~~ radio mobile terminal without sending out the same broadcast packet ~~[[to]]~~ via the radio transfer ~~line-side~~ medium.

8. (Currently Amended) A radio mobile terminal agent processing method for a radio network system having a radio base station connected to a communication line and utilizing radio as a data transfer medium and a plurality of radio mobile terminals connected via the radio base station to the communication line and utilizing the radio, wherein the radio base station ~~side~~ executes:

a process of managing a radio mobile terminal of the plurality of radio mobile terminals as to whether the radio mobile terminal is in a power-saving mode for saving power by intermittent power reception or a normal mode with power received at all times on the basis of a predetermined protocol;

a process of receiving and discriminating broadcast packets traveling over the communication line addressed to the radio mobile terminal operating in the power-saving mode

and, when a broadcast packet concerning a physical address inquiry is found among the broadcast packets traveling over the communication line addressed to the radio mobile terminal, responding to the broadcast packet as an agent for the radio mobile terminal to solve the physical address inquiry; and

a process of reporting the reception of the physical address inquiry to the radio mobile terminal operating in the power-saving mode to urge the radio mobile terminal to switch ~~the operation mode~~ to the normal mode.

9. (Currently Amended) A radio mobile terminal agent processing method for a radio network system having a radio base station connected via an external control unit to a communication line and utilizing radio as a data transfer medium and a plurality of radio mobile terminals connected via the radio base station to the communication line, wherein the external control unit executes:

a process of managing a radio mobile terminal of the plurality of radio mobile terminals as to whether the radio mobile terminal is in a power-saving mode for saving power by intermittent power reception or a normal mode with power received at all times on the basis of a predetermined protocol;

a process of receiving and discriminating broadcast packets traveling over the communication line addressed to the radio mobile terminal operating in the power-saving mode and, when a broadcast packet concerning a physical address inquiry is found among the broadcast packets traveling over the communication line addressed to the radio mobile terminal, responding to the broadcast packet as an agent for the radio mobile terminal to solve the physical address inquiry; and

a process of reporting the reception of the physical address inquiry to the radio mobile terminal operating in the power-saving mode to urge the radio mobile terminal to switch ~~the operation mode~~ to the normal mode.

10. (Currently Amended) The radio mobile terminal agent processing method according to one of claims 8 and 9, wherein the solving process of the physical address inquiry

responds to the broadcast packet as an agent for the pertinent radio mobile terminal without causing the same broadcast packet to be held ~~in the own~~ at the base station.

11. (Currently Amended) The radio mobile terminal agent processing method according to one of claims 8 and 9, wherein the solving process of the physical address inquiry responds to the broadcast packet as an agent for the pertinent radio mobile terminal without sending out the same broadcast packet [[to]] via the radio transfer ~~line side~~ medium.